

Remarks

The above Amendments and these Remarks are in reply to the Final Office Action mailed January 23, 2008.

I. Summary of Examiner's Rejections

Prior to the Final Office Action mailed January 23, 2008, Claims 1-31 were pending in the Application. In the Final Office Action, Claims 1-4, 6-10, 14-17, 21-24 and 31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah et al.(U.S. Patent No. 6,538,992, hereinafter Subbiah) in view of Saxe (U.S. Patent No. 5,631,908, hereinafter Saxe). Claims 5, 11, and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah in view of Saxe in further view of Lefebvre (U.S. Patent No. 7,123,619). Claims 7, 9, 14 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah in view of Saxe in further view of Henderson et al. (U.S. Patent No. 7,133,400). Claims 12, 13, 19, 20 and 25-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah in view of Saxe in further view of Baum et al. (U.S. Patent No. 6,850,495).

II. Summary of Applicant's Response

The present Response amends Claims 8, 15 and 21-24; and cancels Claims 1-7, 25 and 31, leaving for the Examiner's present consideration Claims 8-24 and 26-30. Reconsideration of the Application is respectfully requested. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application.

III. Claim Rejections under 35 U.S.C. §103(a)

In the Office Action, Claims 1-4, 6-10, 14-17, 21-24 and 31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah et al. (U.S. Patent No. 6,538,992, hereinafter Subbiah) in view of Saxe (U.S. Patent No. 5,631,908, hereinafter Saxe). Claims 5, 11, and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah in view of Saxe in further view of Lefebvre (U.S. Patent No. 7,123,619). Claims 7, 9, 14 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Subbiah in view of Saxe in further view of Henderson et al. (U.S. Patent No. 7,133,400). Claims 12, 13, 19, 20 and 25-30 were rejected under 35 U.S.C. 103(a) as being

unpatentable over Subbiah in view of Saxe in further view of Baum et al. (U.S. Patent No. 6,850,495).

Claim 8

Claim 8 has been amended to more clearly define the embodiment therein. As amended, Claim 8 defines:

8. A method for allowing a user to select a quality of service for message delivery, comprising:
storing at least one of a first quality of service choice and a second quality of service choice for each user of the system;
receiving one or more messages and processing each message received on a data stream using a single API;
segregating a plurality of users into a first group and a second group according to the quality of service choice associated with said each user;
multicasting the message to each user selecting the first quality of service;
sending the message directly to each user selecting the second quality of service via point-to-point protocol and ensuring that the user receives the message; and
receiving a response that delivers an acknowledgement of receipt of the message from the second group of users selecting the second quality of service choice and receiving no acknowledgement from the first group of users selecting the first quality of service choice;
wherein multicasting the message and transmitting the message via the point-to-point protocol is performed such that a single message received to the system is transmittable via both qualities of service.

As amended, Claim 8 defines a method that transmits messages to users according to their quality of service choice. A plurality of users is segregated into two groups, one group selecting a first QOS choice and the other selecting a second QOS choice. The message is then either multicast or reliably delivered to each user according to the QOS choice. For the second group of users that have selected the reliable QOS, a response is received that indicates receipt of the message, while for the first group, no acknowledgement is received. In addition, the message is also transmittable via both QOS.

This allows the system to handle both reliable protocols (P2P) as well as unreliable delivery methods (multicast) at the same time for large numbers of users. For example, in the reliable QOS choice, it may be necessary to contact and wait on each subscriber. For multicast QOS, on the other

hand, it may be undesirable to wait for any acknowledgements, due to latency and other issues. The method of Claim 8 allows a single system to handle both reliable and unreliable delivery methods.

Subbiah reference teaches an adaptive scheduling method and apparatus to service multilevel QOS in AAL2. More specifically, Subbiah describes receiving packets and grouping them into queues based on their QOS level. Thus, as each user has a QOS requirement, Subbiah receives packets designated with that QOS requirement and assigns the packets into queues based on that QOS requirement. The QOS requirement of Subbiah appears to specify the delay requirements and cell loss ratio for the packets. For example, according to the QOS requirement, the system may either immediately transmit a package or may wait for a specified delay (4ms) before transmitting to the remote peer entity (col. 3, lines 42-59).

Saxe reference teaches techniques for generating and implementing smooth schedules for forwarding data flows across cell-based switches. More specifically, Saxe appears to describe a switch that can be shared between unicast traffic and multicast traffic. This appears to be done by scheduling the multicast traffic into a subset of available slots and then scheduling the unicast traffic into whatever slots remain (col. 24, line 64 – col. 25, line 8).

However, Applicant respectfully submits that Subbiah in combination with Saxe (the cited references) fail to disclose the features of Claim 8, as amended.

Specifically, Subbiah and Saxe fail to disclose receiving a response with an acknowledgement of receipt from the second group of users, while receiving no acknowledgement from the first group of users, as defined in amended Claim 8. This feature of Claim 8 allows the same message to be delivered reliably (with acknowledgement) to one group of users and the same message to be delivered unreliably (no acknowledgment) to another group of users, based on their QOS choice. No such functionality is described in either of the cited references.

For example, Subbiah describes using the QOS requirement to specify the delay prior to transmitting a packet (col. 3, lines 43-59). Alternatively, the QOS requirement appears to be used to selectively drop some packets when traffic congestion is too high (col. 3, lines 60-67). However, Subbiah does not appear to be concerned with receiving any acknowledgements. More importantly, the same message cannot be delivered while receiving acknowledgements from some users and not others, as defined in amended Claim 8.

Similarly, Saxe was cited to disclose that a switch can be shared between unicast and multicast traffic. However, Saxe also fails to disclose a system that segregates users into two groups

and then receives acknowledgements from one group and not the other for the same message, as defined in amended Claim 8.

In light of the above comments, Applicant respectfully submits that Claim 1, as amended, is neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 15 and 21-24

Claims 15 and 21-24, while independently patentable, recite limitations that, similarly to those discussed above with respect Claim 8, are not taught, suggested, nor otherwise rendered obvious by the cited references. Reconsideration thereof is respectfully requested.

Claims 9-14, 16-20 and 26-30

Claims 9-14, 16-20 and 26-30 are not addressed separately, but it is respectfully submitted that these claims are allowable as depending from an allowable independent claim, and further in view of the comments provided above. Applicant respectfully submits that Claims 9-14, 16-20 and 26-30 are similarly neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

It is also submitted that these claims also add their own limitations which render them patentable in their own right. Applicant respectfully reserves the right to argue these limitations should it become necessary in the future.

Claims 1-7, 25 and 31

The present Response hereby cancels Claims 1-7, 25 and 31, thereby rendering moot any rejection as to these claims. Reconsideration of the application as amended is respectfully requested.

IV. Conclusion

In view of the above remarks, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to

Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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